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PSYCHOLOGICAL ASPECTS OF RELIGIOUS EDUCATION.

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Studies in religious education based directly upon the psychology of childhood and adolescence have grown scarce in spite of the richness of the field and the incompleteness of the work hitherto undertaken. Professor Starbuck has continued a series of articles on 'The Child-Mind and Child-Religion,'[1] but this appears to be the only scientific treatment of the topic in recent months. Of especial significance are his discussion of the characteristics of the child-consciousness (not passivity, not lack of sense of self, not inability to reason, but lack of complexity, lack of response to remote stimuli, lack of self-consciousness); the method of religious growth (instinct-tendencies refined by being carried onto higher levels, by repression and inhibition, by substitution, by admixture); the nature of the religious impulse (a compound inclusive of the whole impulse to live), and a fresh analysis of the stages of growth.

Apart from a single chapter of popular character,[2] the historic connection between religion and education has remained untouched, although the present interest in pragmatism and values might lead one to look for a thorough investigation of the pragmatic side of this connection.

The continuity of religious education with the developing life of

[1] *Biblical World* (Chicago), July, August, September and November, 1907; February, 1908; January, 1909.

[2] 'What Religion has to do with Education.' Ch. VI. of F. S. Hoffman's *The Sphere of Religion*, New York, 1908.

both the individual and society is beginning to be a presupposition of both Catholic[1] and Protestant education. This principle comes to unusually clear expression in the Proceedings of the Religious Education Association.[2] The university has the function of reforming social ideals,[3] of working out a social philosophy, and of training leaders for the social advance.[4] At the other end of the educational ladder, the Sunday school is called upon to become a social force by training its pupils directly in community activities.[5] The religious function of the public school can be fulfilled by fostering a general moral idealism, with specific attention to its practical social expressions.[6] In the same year in which these sentiments are heard in the Religious Education Association, a member of a committee appointed by the National Education Association to investigate and submit a tentative report on a system of teaching morals argues for recognition in the public schools of 'the religious basis on which morality rests,' and for 'formal worship once a day . . . in the schools of America.'[7]

A genuine conflict of principles developed at the International Moral Education Congress.[8] It had already appeared in articles by Professor Muirhead and Professor Dewey.[9] Muirhead argues that the unity of spiritual purpose must be restored to education. The merely naturalistic interpretation of evolution, which would subject man to nature, has not convinced the age. Rather, we think of human life from the standpoint of social solidarity, and we then look for kinship between this social product and the world that brought it forth. The history and psychology of religion, moreover, show "the essential continuity of religion with other ways of apprehending the world of

[1] See *Proceedings of the Catholic Educational Association* (1651 East Main St., Columbus, O.), particularly addresses by Thomas E. Shields, pp. 199–223, and Wm. J. Kerby and John A. Ryan, pp. 438–458.

[2] The volume for 1908 bears the title *Education and National Character* (72 East Madison St., Chicago).

[3] *Ibid.*, I. J. Peritz, pp. 118–127.

[4] *Ibid.*, F. G. Peabody, pp. 15–27.

[5] *Ibid.*, G. W. Mead, pp. 287–293.

[6] *Ibid.*, H. F. Cope, pp. 220–230; C. W. Votaw, pp. 166–170.

[7] *Proceedings of the National Education Association* for 1908 (Winona, Minn.). Address by C. W. Barnes, pp. 453–456.

[8] See J. H. Muirhead, 'The Central Problem of the International Congress on Moral Education,' *Hibbert Journal*, Jan., 1909, pp. 346–351. Cf. M. E. Sadler, 'The International Congress on Moral Education,' *International Journal of Ethics*, Jan., 1909, pp. 158–172.

[9] J. H. Muirhead, 'Religion a Necessary Constituent in all Education,' *Hibbert Journal*, Jan., 1908, pp. 343–358; John Dewey, 'Religion and our Schools,' *ibid.*, July, 1908, pp. 796–809.

finite experience."[1] Ripening of the mind to this largest meaning of life must be included in the aims of education. "In pledging itself to education of any kind, the state has pledged itself to religious education." Muirhead's suggestions as to the means of fulfilling such a function are, it must be confessed, more agreeable to English than to American traditions.

But Dewey asserts that religion conceived thus as a universal function and consciously free from supernaturalism does not yet know what it wishes to teach. Immanent in all functions of man's consciousness, it has no obvious specific function of its own. It cannot use the old symbols without confusion and insincerity. The two foci about which the higher aspirations of the age may gather without equivocation are democracy and science. When democracy is well developed, it may lead to a new birth of religion, but in its present beginnings, with the human consciousness dispersed rather than focalized, a *laissez-faire* policy is indicated, even though its adoption involves, as it must, loss of joy and consolation.

Dewey sees the practical difficulties more clearly than Muirhead. But, since we are permitted to hope for a new religion of democracy, why should not democracy, if religion is what it wants, go consciously at work toward this end? Why should religion be a mere appendage or by-product of social conditions? Is a *laissez-faire* policy, in fact, possible?

[1] In an article of my own, 'Moral and Religious Education from the Psychological Point of View' (*Religious Education*, Dec., 1908, Chicago) the position is taken that our life, as human, is a more or less conscious search for the good; that our thinking of the good goes on inevitably to the notion of unity, completeness, and permanence of the good; that our desires enlarge accordingly, and that thus morals and religion, and moral and religious education, are continuous, not discontinuous.

RECENT STUDIES ON PERIODICITY IN MENTAL DEVELOPMENT.

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From the point of view of both genetic and educational psychology, one of the most pressing problems at the present time is that which concerns the periods of mental development. It can hardly be said that the differentiation of educative methods and materials in respect to the hypothesized 'nodal-points' of mental growth is as yet anything more than experimental and tentative. In fact, educators are rather evenly divided into two groups: those who believe that mental development is marked by sharp crises or turning-points, and those who hold more closely the idea of a gradual and rather uniform growth from infancy to adulthood. Advocates of the first view naturally emphasize the differentiation of methods and materials for adolescent and preadolescent children; advocates of the latter view tend to minimize these differences.

Of the recent investigations bearing more or less directly upon this problem, those of Crampton are perhaps most significant. Crampton's work, it is true, is only indirectly psychological in its nature, and yet it promises to clear up a difficulty that has proved very troublesome to the genetic psychologist. Hitherto the description of mental development has followed the course of what Crampton terms 'chronological age.' We have thought of the child of ten as representing certain mental traits which were quite different from those represented by the child of twelve or fourteen or sixteen. And, while the possibility of variation has been admitted in theory, it has had little influence upon the distinctions that are made in educational practice. 'Chronological age' has been the standard for determining grading, school porgrams, the limits of compulsory education, and other equally vital questions.

Crampton's investigations[1] promise a far more accurate index of

[1] C. W. Crampton: 'Anatomical or Physiological Age *versus* Chronological Age,' *Ped. Sem.*, XV., 2, pp. 231–237; 'The Influence of Physiological Age upon Scholarship,' *Psych. Clinic*, I., pp. 115–120; also reports in *Physical Ed. Rev.*, 1907–8; and in *Am. Anthropologist*, October, 1905.

the degree of both mental and physical maturity than that furnished by chronological age. This index is *actual pubescence* determined by physical examination. Obviously the import of pubescence could not be determined until physical examinations had been instituted on a large scale. Now that this has been done, the correlation of the appearance of pubescent symptoms with other physical changes and with mental changes follows as a matter of course. Hall and others have prepared us in a measure for the results of these correlations, and yet the very marked differences which Crampton finds between the sexually mature and the sexually immature when the fact of maturity has thus accurately been determined indicate that even the more radical statements were scarcely overdrawn. That, age for age, the mature boys are more than 33 per cent. heavier, 10 per cent. taller, and 33 per cent. stronger than the immature boys does not surprise one so much, but the very noticeable mental inferiority of the immature boys in the high school as compared with the mature boys is something that we were not prepared for. Nor is the statement that 'earlier pubescence favors good scholarship'[1] entirely in harmony with our preconceived notions regarding the advantages of a prolonged 'period of infancy.' It is somewhat comforting to note, however, that preliminary investigations made upon children in the elementary schools give some promise that we may retain this principle in a modified form, for, with younger boys, it seems that those who are poorer in scholarship are, as a rule, *more* advanced in maturity.[2] It may well be that there is an 'optimal' age of sexual maturity, beyond which the retardation of puberty means arrested mental development, and below which premature pubescence will have a stultifying influence upon mental growth.

Crampton's further investigations will be watched with interest, for not only do they promise to establish norms and standards concerning the advent of puberty that are far more reliable than any that have hitherto been proposed, but there are indications that other criteria will be discovered which will enable us to locate definite nodal-points in preadolescent development. It will be interesting to learn whether Hall's hypothesis of an early 'transition' period, resembling adolescence in many of its characteristics, and occurring between the ages of six and eight, will find confirmation from these studies. It should not be forgotten that Crampton is in general agreement with Hall in respect of the great mental and social differences between the

[1] *Psych. Clinic*, I., p. 120.
[2] *Ped. Sem.*, XV., p. 234.

mature and the immature, and that he regards the chief conclusions of Hall's 'Adolescence' as 'beyond question.'[1]

The more specific differences between adolescents and preadolescents have been made the subject of several recent studies. Some of these, perhaps, will need new interpretation in the light of Crampton's results, but almost all of them offer something new and something tangible to our knowledge of mental growth. The much disputed theory of the relative incapacity of preadolescent children for abstract thought finds some confirmation in Miss Ellison's[2] study of children's definitions. "Such a mastery of common abstract ideas as would make possible reasonably perfect definitions is nearly or quite wanting in children of thirteen or under, though, for several years before that time the abstractions have been clearly enough grasped and the vocabulary has been large enough to allow a good deal of definition by synonyms. Still earlier the children seem to hold the idea in a distinctly concrete fashion, and to convey it, when required to do so, by means of concrete examples, while the youngest children of all in many cases cite instances of use instead of really giving the meaning of the word, possibly for the reason that, at that time, the idea cannot be brought clearly before consciousness." It would be interesting to know whether adolescent children handle abstract ideas in general more effectively, and especially whether the increase in ability to think in the abstract comes suddenly with the onset of puberty or is a gradual product of increasing experience. Studies of this sort, carried on by means of Crampton's criterion of physiological age, would do much to settle one of the most important problems in educational psychology.

Two suggestive studies of the imagination of adolescents have recently appeared. Libby,[3] in comparing two sets of themes upon the same topic, one written by fourth-year high school pupils and the other by pupils from ten to fourteen years of age, finds that the more mature productions are marked by 'greater unity, more careful explicit reference, and more careful sentence-structure.' The older pupils also show a more decided tendency toward rhythmic sentences. He concludes that the great emotional and imaginative change in adolescence comes after the age of sixteen. Brittain[4] studied the

[1] *Ped. Sem.*, XV., p. 234.

[2] Louise Ellison: 'Children's Capacity for Abstract Thought as Shown in Their Use of Language in the Definitions of Abstract Terms,' *Am. Journ. Psych.*, XIX., pp. 253–260.

[3] W. Libby: 'The Imagination of Adolescents,' *Am. Journ. Psych.*, XIX., 2, pp. 249–252.

[4] H. L. Brittain: 'A Study in Imagination,' *Ped. Sem.*, XIV., pp. 137–207.

imagination of a limited group of adolescents — nineteen boys and twenty-one girls, ranging in age from thirteen to twenty. His method of investigation is sufficiently similar to those of Lobsien and Miss Chalmers to permit some interesting comparisons of results, and, at the same time, it introduces some suggestive variations. He finds that the imaginative interests of boys are less various than those of girls, the boys emphasizing motor interests, while the interests of the girls are 'more static and emotional.' Girls undoubtedly excel in visual and auditory imagery, boys in motor imagery; the girls also excel in visual and auditory memory, but this excellence does not seem to have any necessary connection with imaginative power. In the writing of imaginative stories, boys excel girls in preserving constructive unity. Brittain believes that the differences between the sexes in imagery are to be partially explained by environmental differences, and especially by the larger opportunities that boys have for motor activity. "At least the activity of the organism, as well as its inherent constitution, seems to determine the character of its interests, which in turn determine largely the form of the imagination."

With regard to mental changes during later adolescence, the recently published study by Ruediger[1] suggests some interesting possibilities. There seems to be, in many adolescents, a rather profound intellectual awakening, which comes rather later than the more commonly observed (and perhaps more easily recalled) emotional and religious awakening. Ruediger's results indicate that this intellectual awakening occurs in most individuals after the age of eighteen. The data for the study were obtained from a selected group (teachers and graduate students), but for this group they may be taken as fairly conclusive. The study is particularly important as an example of the carefully controlled employment of the questionnaire method.

Smith's investigation[2] of pupils' voluntary reading throws some interesting side-lights upon differences between adolescent and preadolescent children. The investigations were rather extensive, taking account of 915 boys and 1,284 girls in the schools of two Iowa cities. It is rather surprising that a greater amount of voluntary reading is done by pupils of the upper grammar grades than by high school pupils. It is hardly probable, however, that this difference is due to age-characteristics; the fact is probably to be explained by the stress of home work in the

[1] W. C. Ruediger: 'The Period of Mental Reconstruction,' *Am. Journ. Psych.*, XVII., pp. 352–370.

[2] F. O. Smith: 'Pupils' Voluntary Reading,' *Ped. Sem.*, XIV., pp. 208–222.

high school which diminishes the time available for voluntary reading, and by the fact that the teachers of the upper grammar grades are possibly more expert in the formation of reading habits among their pupils than are the teachers of the high school. The results show that adventure is a leading motive in voluntary reading below the high school. Humor, pathos, and the concrete virtues are also marked in this preadolescent or early adolescent period. With the high school pupils, the reading motive is less specific. Much of the high school voluntary reading consists of light, popular fiction, which seems to indicate the dominance of the sex-instincts at this time, although the author does not mention this factor. As a practical conclusion from his study, he urges a closer correlation between high-school English and the pupils' voluntary reading, suggesting that the 'classics' be supplemented by works of a lighter and more popular character. The inevitable conflict of the widely differing types of educational value that may inhere in the study of literature is clearly shown in this suggestion. Indeed, there is a crying need in educational psychology for an investigation of the whole field of values. If literature is studied simply as a means of developing good habits of seeking diversion and amusement, the selection may well follow the lines suggested by Smith's study. If, on the other hand, high-school literature should attempt to impress upon the pupils the great ideals that are embodied in the classical masterpieces, and which it is highly improbable that the majority of pupils would adequately appreciate without the stimulus of the teacher, then another basis of selection is justified.

Some more light upon mental differences between the sexes in childhood and adolescence is furnished by Doran's study of vocabularies.[1] The method employed in these investigations is somewhat different from any that has hitherto been suggested. It consists, briefly, in having the subjects define the words appearing upon various pages of the dictionary (the pages selected by chance), computing the average for the several pages, and finally multiplying this average by the number of pages in the dictionary. From all of the previously published vocabularies of young children, Doran concludes that girls surpass boys in vocabulary up to the fifth or sixth year. His own investigations indicate, however, that, for older children and for adolescence, the male vocabulary is somewhat larger than the female vocabulary, although there are numerous exceptions to this rule. The general superiority of the male vocabulary, Doran attributes to the greater range of activity afforded to men and boys as contrasted with

[1] E. W. Doran: 'A Study of Vocabularies,' *Ped. Sem.*, XIV., pp. 402–438.

that afforded to women and girls. Although accurate correlations were not made, the author is convinced that there is a direct relation between the extent of one's vocabulary and one's general mental ability as determined by school standings. In this connection, he is in agreement with Whipple,[1] who has seriously proposed the extent of the vocabulary, measured by the 'word-building' test, as a safe and easily-applied index of general intelligence.

Our knowledge of the very early development of the vocabulary has been somewhat enriched by Cooley's intensive study[2] of the early use of 'self-words.' Cooley finds that the correct understanding of 'I' and 'you' when used by others was achieved by his own child by the middle of the nineteenth month. This, however, does not involve the same problem as the correct *use* of 'I.' Phrases containing 'I' are used imitatively long before the child feels the subjective reference of the pronoun, and this use continues long after the correct significance is acquired. This latter 'subjective' use appeared, in the case observed, early in the twenty-second month. The author believes that his child gradually came to this subjective meaning by "noticing the indications of self-feeling (the emphasis, the appropriate actions, etc.) accompanying the use of 'I,' 'me' and 'my' by others." "These indications awaken his own self-feeling, already existing in an inarticulate form. He sympathizes with them and reproduces them in his own use of these words. They come to stand for a *self-assertive feeling or attitude*, for self-will and appropriation." It is interesting to note that, in Cooley's opinion, the 'I' does not mean primarily the visible and tangible body, but rather a self-assertive feeling, linked with action. Such words as 'Baby' come into use about the same time as 'I' and mean primarily the physical body. The shadow on the wall and the reflection in the mirror play an important part here. It is noteworthy how comparatively late self-feeling seems to connect itself with these images. 'I' is a social conception from the outset in the sense that its very essence is the assertion of self-will in a social medium.

[1] G. M. Whipple: 'Vocabulary and Word-building Test,' PSYCH. REV., N. S., XV., pp. 94–105.

[2] C. H. Cooley: 'A Study of the Early Use of Self-words by a Child,' PSYCH. REV., N. S., XV., pp. 339–357.

PSYCHOLOGICAL LITERATURE.

PSYCHOLOGY OF RELIGION.

Psychologie d'une Religion. G. REVAULT D'ALLONNES. Paris, Alcan, 1908. Pp. 289.

Not the least interesting field of research for the psychology of religion is that afforded by the history of various minor sects and 'freak' religions of the present time. The actual 'facts' are usually more accessible in cases of this sort than in those of the older and more firmly established faiths. It is possible in these cases to get hold of origins and developmental tendencies that throw much light upon hoary mysteries of the older religions. The book before us is an admirable and exhaustive study of one of these modern 'freak' religions, Monodism. It originated and developed in France in the latter half of the nineteenth century and still persists in that country in a small circle of devotees.

Most of the beginnings of 'revealed' religions are so remote from us in time and so obscured by traditions as to be incapable of detailed analysis. The case of Monodism is different. We have here a small sect, most of which knew their 'Christ' personally; the original 'sacred writings' are accessible; there were disciples, prophets and all the 'experiences' of the orthodox religions materializing under our eyes, and every detail and motive can be traced in the fullest detail. Manifestly a clear understanding of the history and dynamics of the sect is of interest both to the psychologist and to the student of comparative religion. We can see here in miniature, as it were, the whole process of the origin and development of a religion of the Christian type. The value of the account here presented is much enhanced because of the thorough comparative method adopted by the author. He works out fully the analogies between this movement and others of ancient and modern times which are less accessible to scientific investigation.

Guillaume Monod, the modern French Messiah, was born in 1800, the son of a Protestant minister. He was a retiring child and throughout life was characterized by marked humility and sweetness of disposition. He received a thorough but onesided literary education, was ordained a minister at the age of twenty-four but did not obtain a

pastorate for some three years on account of some doubt as to his orthodoxy on questions such as the divinity of Christ, etc. In 1827, however, he seemed to experience a change for the better and the following year received a charge into which he entered with much evangelical enthusiasm. So great was his zeal that he got into various difficulties with local authorities and was dismissed in about a year. Soon after this, signs of mental derangement appeared and he was confined in various asylums for the insane. He had periods of excitation accompanied by delirious acts, refused food, mutilated himself, experienced hallucinations, ecstasies, mystical states and heard voices which, while at first undefined, became gradually more definite and seemed to proclaim to him that he was Christ returned to earth. In his saner moments he attempted to organize these visions and he finally built upon them a remarkable religious structure.

After four years of confinement he was released and for ten years lived in comparative retirement in Geneva where he worked and wrote to "transform his delirium into a doctrine. By reflection, by theological elaboration, by contact with men, by adjustment to social conditions, what was at first merely morbid exaltation and hallucination became little by little a defensible religion." At the end of this period he was again offered a pastorate on condition that he avoid all reference to his claim of being Christ, to which he finally agreed as also to the public burning of his writings. For the next twenty-four years he performed acceptably the ordinary duties of a Protestant pastor. His retraction was, however, not sincere. A few copies of his books were secretly saved and he said afterward that he was simply waiting, in this period of silence, for the voice of God again to order him to speak out. In 1875 he wrote that he had never for a moment, since 1833, doubted that he was the Christ. In view of this avowed belief, his long period of overt retraction and silence furnishes an interesting psychological problem into which the author enters at length. At the age of seventy-two and after many years of apparently perfect sanity the voice of God is again heard, commanding him to speak to the world of his real nature. This he did with much modesty and at first preferably only to those willing to believe in him. His propagandism finally became bolder and he defended all his claims tactfully, with the greatest skill, and by constant appeal to the Bible. He pointed out the injustice of attempting to discredit him by reference to his early mental aberration. This, he asserted, was a mere incident of his life having no connection with his conception of his character and mission.

For fourteen years he preached a gospel of singular grace and pu-

rity, not essentially different from general Protestant teachings except for the central doctrine concerning himself. A little group of believers gathered about him and a number of churches were founded in France and Switzerland. All the phenomena of prophetism, of the organization of a doctrine and the defending of it in the midst of a hostile society here occur on a small scale. The author's discussion of the various periods of the development of Monodism, of the general place of neurotic experiences in the development of religion, and the place of social conditions in the determination of the truth or falsity of a new prophet is most suggestive. As he well says, William Monod could justify himself from every point of view that the orthodox church could raise. The Scriptures furnished ample warrant for his claims. His own temporary insanity is paralleled by that of many of the prominent characters in the Bible. When his prophecies were not fulfilled he was ready to point out that a like fate befell many of the prophecies of the Bible if they were strictly interpreted. Not the least interesting phase of his teaching is his attempt to allegorize every event of his life. It is by appeal to allegory that he seeks to escape criticism on many points.

The value of this exhaustive study is greatly enhanced by a chapter on messianism, ancient and modern. In the book as a whole the theologian, sociologist, and psychologist will find much that is interesting and valuable.

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Psychological Aspects of the Welsh Revival: 1904–5. A. T. FRYER. Proc. Soc. for Psychical Research, 1907, XIX., 80–161.

The recent Welsh revival is a striking illustration of a social contagion within small and relatively circumscribed groups. While having much in common with other revivalistic phenomena, it necessarily had an individual character also. Rev. Mr. Fryer's painstaking study is a valuable addition to the literature in this field. His point of view is thoroughly scientific throughout. His own report is brief and pointed and in an appendix he gives many letters from persons who were, like himself, eyewitnesses to many of the occurrences.

Although, after the revival began, the press did much to spread it by giving vivid portrayals of occurrences in particular localities, the author believes that the most important influence in determining the growth of the revival was the general attitude of expectancy widely prevailing in certain parts of Wales then and for some years previous. In many places there had been systematic preparation by prayer for

some time and these were the places where the revival, when it came, was most intense. As he says, "If a hundred or two hundred of persons in Wales were for years desiring a particular line of action, and spent a great deal of time in expressing their desire, the force so generated and directed could hardly fail to reach and move some sympathetic minds within the same area." Although he is inclined to accept telepathic influence as a fact, it is clear that there are abundant means for accounting for many aspects of such a social movement as this without recourse to telepathy. At any rate the repeated prayers of many people created a general atmosphere of expectancy. In the meetings where there were the greatest results the people were always relatively expectant and open to suggestion.

Evan Roberts was not the cause but rather one of the moving spirits of the revival, when it had once started. From a boy he had shown a strong bias toward religion and in youth had experienced visions and ecstasies of a pronounced mystical type. In some of the nervous collapses which he underwent during the revival he was subject to various motor automatisms, such as the jerking of the head, suggestive of a nervous instability possibly connected with a severe shock received in an accident when he was a boy. In his school work as a boy he showed no more than ordinary ability and later when he decided to study for the ministry his work was so interrupted by his mystical preoccupations that he did nothing of a systematic character. He was, however, in his way a constant student of the Bible and his public utterances showed that he was saturated with its teachings although what he said was not otherwise remarkable. In the meetings he attended he always sought to get into rapport with his audience, chiefly by looking at each one fixedly for a few seconds, and he was apparently able to judge with a good deal of accuracy the person's mental condition, for after his survey of his audience he would speak to it briefly of its condition spiritually. Of course they usually expected to be correctly diagnosed, so it is not strange that they accepted whatever he said as actually true of themselves. His utterances often staggered his hearers, serving to convince them of his supernatural power. He frequently had attributed to him the gift of prophecy. His actions were governed almost entirely by an inner voice which told him when to speak, when to keep silent, whither to go, etc. On one occasion this voice suddenly commanded him to be silent for seven days, and then, as in all cases, he implicitly obeyed it. One of the most admirable characteristics displayed by him was that of modesty. He absolutely refused to be lionized.

It is of interest to note that the motive of fear played a relatively small part in this movement. The main burden of Robert's teaching was that of love and joy, so that while the influence of the revival lasted it apparently had much wholesome social influence.

Reports of all sorts of unusual experiences were rife and it is an important service this author has accomplished in giving a nearly contemporaneous record of what apparently actually occurred. It does not follow that every experience is even thus definitely ascertainable; much less may we be sure of the causes of all of them. The experiences of different persons varied widely. With some there was mere increase in bodily temperature, others had auditory hallucinations of various kinds, such as the chiming of bells, noises, and singing in the air above them. But the most curious and apparently the most commonly reported experience was that of seeing lights. These were seen by all manner of people, believers and unbelievers. The author thinks there has been much exaggeration if not actual deception in the reports, but also holds that there even yet remains a limited number of cases which deserve credence. It is a curious fact that there are many traditions of the appearance of mysterious lights in certain localities in Wales. A number of cases in recent years have been reported. With a reputation for seeing mysterious moving lights, it is not strange that many of those under the influence of the revival should have had experience in this form. It is thought that some of these lights in the past, which seem to have been especially frequent in certain localities, may have been due to incandescent vapors of some kind. Tests for atmospheric electricity made at the time of the revival yielded no result. The causes of these experiences, as far as they are genuine, were probably various. Some may have been atmospheric phenomena, others may have been simply lanterns carried along the hillsides, or railroad signals transformed by the heated imagination into preternatural occurrences. In some cases the reports of different observers vary so widely that we are driven to the conclusion that they were subject to some sort of collective hallucination. One woman prominent in the work was reported to be always attended by a light of some sort and it is interesting that some of the most striking experiences of this sort were had by persons on their way home from her meetings. Almost all who saw the lights were in strong sympathy with this woman.

This article does not deal with the moral effects of the Welsh revival. We learn from the most recent reports, however, that, since the lapse of the movement, the normal growth of the Welsh churches has been seriously interfered with and that in some cases there has been

a great falling off in membership where, previously, there had been steady growth. I. K.

The Psychological Phenomena of Christianity. G. B. CUTTEN. New York, 1908. Pp. xviii + 497.

This volume is, in the main, a descriptive account of experiences, usual and unusual, which have been at various times associated with the Christian religion. Such topics as mysticism, ecstacy, glossolalia, visions, witchcraft, asceticism, religious epidemics, faith cure, miracles, etc., are representative of the subjects treated on the pathological side, and on the other we have conversion, religion in relation to age and sex, the place of the various mental processes in the ordinary religious experience, prayer, immortality, etc.

The author has drawn from a wide range of recent literature and has massed many illustrations which are well organized and presented in a popular readable form. It is perhaps unfair to criticize the work too freely from the point of view of scientific psychology, for it is manifestly written for the general reader. The psychological point of view, as far as it is applied, is good and the interpretations of the unusual or pathological experiences of religion are such as are generally accepted, with the exception that the theory that the subconscious is a special avenue by which divine influence may penetrate the human mind, is definitely espoused at the outset, and it appears as a *deus ex machina* to assist the author over difficulties which his ordinary psychological analysis cannot penetrate. The logical confusion involved in this supposition is seldom realized by the practical religionist, and some well-known psychologists have, of course, helped to perpetuate the theory by the weight of their authority. As far as the present reviewer can see there is no reason why the psychologist should take for granted the universe of spiritual beings postulated by religion. He may well recognize that the religionist is describing some genuine element of his experience, but as far as psychology is concerned these references to a world of spiritual influences must be interpreted in terms of the rest of experience before they can enter into psychological science. Even though a spirit world, capable of interacting with that of human experience, should really exist, it is difficult to understand why its influence upon men should be supposed to be confined to only one aspect of the psychical life and that the least understood aspect.

The author's account of the mental machinery of the religious experience is the least satisfactory portion of the book. It is labored and

obscure and partakes of the metaphysics of Professor Ladd rather than of any clear-cut psychological point of view.

The book will serve to popularize many sensible explanations of religious experience, and the general reader will probably not be particular about points which trouble the conscience of the hypersensitive psychologist. The latter will not find in the book anything that is new either in point of view, method or material. I. K.

The Will to Believe as a Basis for the Defense of Religious Faith. A Critical Study. ETTIE STETTHEIMER. Archives of Philosophy, Dec., 1907. Pp. vi + 97.

The plan followed by Dr. Stettheimer is first to outline in a connected way the doctrines of Professor James, and secondly, to examine critically these doctrines. This criticism has reference more particularly to Professor James's doctrine concerning religious beliefs; "this theory is to be criticized not only for its intrinsic validity, but also, and more especially, in its character as a foundation for the defense of religious belief." The spirit of the writer cannot in fairness be said to be polemical, although some of the admirers of Professor James may be inclined at times to so believe.

The author prefaces the first task with the statement that a "connected presentation of James's theories must necessarily be more or less of a construction, for James's own work is not systematic." The exposition of Professor James's doctrine is given under two subheads: (1) The defense of religious faith; and (2) The basis of the defense of religious faith: the theory of judgment. Professor James's general philosophical position is most clearly formulated in the essay on 'The Sentiment of Rationality.' The general place of religious faith in Professor James's doctrine receives attention as well as the significance of the religious hypothesis. The author proceeds to analyze further the relation of will and belief and finds that Professor James makes the essence of belief to be manifest in the act of choice regarding those things to which we turn 'with a will.'

The critical portion of the work is contained in three chapters, the headings of which indicate the attitude of the writer. The first of these is: 'James's doctrine as a defense of religious faith at the cost of pure knowledge.' The second, 'James's doctrine as a defense of religious faith at the cost of objective reality'; and the third, 'The defense of religious belief as a vicious circle.' The writer declares that contradictory tendencies are present in Professor James's theory of the relation of will and belief. This is shown by a dual-

istic position regarding faith and knowlege in one place, while in another faith is held to be rooted in the nature of thought. This latter position, if carried out in its implication, obviously leads to the conclusion that faith bears a very clear relation to knowledge, being in fact indispensable for the seeker after truth or knowledge. This idea of the basic relation of the faith to thought is not maintained by the writer of the monograph. A third possibility is that the will is to be regarded as subordinate to the intellect, inasmuch as will is only introduced when scientific or theoretical evidence is wanting. Dr. Stettheimer does not regard this last position as fairly representative of Professor James's doctrine considered as a whole, although it is admitted that such a position is at times apparent. This last position is characterized as that of pseudo-voluntarism. Dr. Stettheimer does not believe that Professor James is to be classed in the movement represented by the names of Hume, Kant, Fichte, Carlyle, and Paulsen.

Professor James wavers between the two different positions indicated above, and the broad charge is made that in defending religious belief in the manner in which he does he thereby 'sacrifices the possibility of knowledge.' The overcoming of the difference between faith and knowledge is accomplished at the cost of knowledge, or else the duality is not superceded. If knowledge and faith are coördinated, then religious beliefs are objects of faith which cannot be affirmed as real by the judgment, or if these are affirmed by the judgment then such an affirmation is a debasement of that currency of judgment which would have knowledge related to objective reality in order to be true. Dr. Stettheimer holds that a charge of subjectivism cannot be sustained against Professor James, but maintains that reality for Professor James is what is willed and affirmed, since no fact becomes real until such volitional affirmation is made as relates this to one's self. If objective reality exists independent of the subject, an attitude that belief in the truth of a judgment is influenced volitionally could only be an attitude wherein we will to deceive ourselves.

Dr. Stettheimer concludes that Professor James is not successful in supplying a justification for religious faith, for faith and knowledge are not harmoniously related. The reason for this lies in the fact that the mental state characterized by belief in the one case is not of the same kind as the state of belief when related to judgment. Professor James's error here is apparently due to his notion of freedom. The implication of determination which is present in what is designated as free belief, whereby belief does not originate reality but is only concerned in its cognition, results in a deception of one's self concerning what is believed.

The question is pertinent whether Dr. Stettheimer has correctly interpreted Professor James at all points. The writer's failure to do so may be due to the fact that Professor James's views change somewhat in the course of his writing — a fact not peculiar by any means to him but found in other writers, as Kant, for instance.

Those who read this book will probably fall into two classes in their estimation of it. The followers of Professor James will hardly believe that Dr. Stettheimer has done full justice to their author; and those who have little sympathy with Professor James's doctrine will find in Dr. Stettheimer's examination and criticism a welcome confirmation of their own views. It may be asked whether it is not possible to find a certain intermediate ground where it is not necessary to reject Professor James's doctrine of defense of faith and religious beliefs because this defense is purchased at the cost of pure knowledge and objective reality. That is, is it not possible to find a position which, while maintaining the integrity of pure knowledge and an objective and universal reality, can also admit the relevancy of faith and religious beliefs? The reviewer believes that this is not impossible.

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INDIVIDUAL PSYCHOLOGY.

Das Problem einer Charakterologie. EMIL LUCKA. Arch. f. d. ges. Psych., 1907, XI., 210–240.

Lucka divides his paper into four parts. The first part, the special psychology, is chiefly a criticism of the existing systems of differential psychology. Lucka holds that a special psychology or characterology must take the individual consciousness as a functioning organism, and must search for a basal function. All mental phenomena must be considered as a branching out of this basal function and they can be separated only by abstraction. Both the German and the American-French school of differential psychology have failed to do this. They have searched for coördinated elements instead of a basal principle. These they have attempted to fix by arbitrarily chosen mental tests, which Lucka thinks can at best give only a psychometrics, but never a psychology. No attempt is made to show a necessary relation between the elements discovered by the tests. Finally, they are satisfied with a cross-section of the psychic, neglecting the genesis entirely.

In the second part the author gives what he thinks the two aims of a characterology. The first task is to examine all the ramifications of the concrete psychic life. The second task is the classification of

everything special in the individual into his total consciousness, and then of the special individual in his place in the universal human.

The third part gives the methods of a characterology. The first aim is to see the psychic life in its whole complexity. Life may be studied in biography, reports of ethnology, results of folk psychology, in the psychological analyses of our great poets, etc., above all however by direct observation, provided the observer has the faculty of sympathetic insight. Experiment might be valuable, but until now it has failed to bring useful results. Lucka recognizes the difficulty of this method, as it requires a peculiar faculty on the part of the observer, and because no degree of exactness can be reached through it.

In the last part the author gives a brief sketch for the founding of a systematic characterology.

Consciousness draws all its material from the objective world, but the individual mind determines what is taken, in what form it is taken, with what intensity the new is assimilated with the already existing, and finally what further becomes of the contents thus taken in the individual consciousness. These must always be functional movements as the content of consciousness grows out of functions.

The inner structure of the concrete consciousness reveals itself in every act (*a*) by its position to the environment, (*b*) by the inner psychic processes. The horizontal organization, showing what relation the individual consciousness can take to the environment and to its own content, gives two possibilities: (1) The relation may be direct, the reaction following the stimulus without being consciously affected by the other contents of consciousness; (2) the relation may be mediate. Here reflexion is placed between stimulus and reaction. The individual has contents and, besides that, he knows that he has them and how he has them.

The vertical organization shows what becomes of the material thus taken in the interweaving of the concrete consciousness. The degree of intensity of a subjective reality lies in the degree of independence from the data of the environment. The man who always acts on the spur of the moment is the lowest form of the reproductive type. He reproduces the content as well as the form of all impressions. On the other end of the scale is the man of the producing type. For him impressions are only raw material for new contents. The quantitative measure of the individual psychic value is the predominance of the power of reshaping over the power of merely preserving. The two basal functions of consciousness are memory and imagination, corresponding to the opposites, learning and experience.

In experience (Erlebnis) Lucka believes to have found the basal function domineering all other functions of the psychic life.

Character, from the functional side, is the disposition of the individual psychic organization to take impressions of the environments in a specific manner and to react upon them in a specific way, *i. e.*, the characteristic relation to the environment. Now there are two possible relations: (1) The contents of the individual consciousness may be residues of previously experienced stimulations; or (2) everything taken by the consciousness may only be the raw material for new contents. This peculiar power to create new contents is to experience, and a person possessing this power is a personality. Personality, the I or the soul, is the inner organization, one might say the *a priori* element, a function free of all material. Form is given to personality by contents coming from the external world.

In this basal function Lucka believes to have found the explanation and the basal principle for a differentiation and a classification of an individual consciousness. Through it, he believes, it is possible to reveal the innermost nature of man, his relation to the external world and his position to the general culture value.

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SUPERSTITION.

Superstition and Education: FLETCHER BASCOM DRESSLAR. University of California Publications, Vol. V., No. I., 1907, pp. 1–239.

This extensive investigation 'has to do with that mental tendency in humanity which finds satisfaction in retaining superstitions and in believing in them.' The material for the study was collected from normal-school students in California, the method employed precluding the possibility of suggestion. Students were asked to write all the superstitions they knew, and to indicate their attitude toward them by 'belief,' 'no belief,' or 'partial belief.' In all, 7,146 separate reports of superstitions were thus obtained from 875 persons, mostly young women. Of the 7,146, 44.9 per cent. were expressions of 'belief' or 'partial belief.' *Almost every person believed in at least one superstition.* Considering the source of the material, the extent of belief in superstitions is astonishing, and educationally discouraging.

The author employs *superstition* in the sense of an instinctive desire to believe in causal relations that cannot be proved to exist. Superstition exemplifies the tendency of the mind to an inertness which results in over-ready generalization, extreme respect for tradition, and

the choice of the line of least resistance. The tendency has also an emotional basis, largely in fear.

Superstitions have served various purposes. They have been used to frighten children into behavior according to the dominant social and ethical ideals; as pedagogic devices to train people into habits of economy; for their therapeutic value in the treatment of diseases (effect of suggestion); and as a means of relieving the mind from its indecision. The author considers the last use so important as to constitute almost a 'hygienic necessity' for superstition.

Belief in luck superstitions is higher than for superstitions in general; and because it tends to discourage effort it is deemed specially harmful. Good-luck superstitions are less frequent than those portending bad luck; hence we seem more fearful than hopeful.

An ingenious and (for the reviewer) novel theory is advanced to explain the well-known mental preference for odd numbers. According to the author it grows out of our preference for balance, or equilibrium, which of course is more appropriately symbolized by the odd than by the even numbers.

The study forcibly evidences the primitive notions of cause and effect among the masses of people, and shows that we have not progressed altogether beyond the pale of primitive animism. Since superstitions have their seat so largely in the emotions they are difficult to reach. No system of education can reasonably hope to reconstruct humanity and free us from superstition in a decade, or even a century. Education can, however, avail something by paying greater heed to the culture of the emotions, by avoiding the improper use of myths in the early years, by manual or industrial training and other use of the *realities*, and by constant watchfulness on the part of the teachers in fostering the scientific attitude.

It needs hardly to be said that so careful and extensive a study as this one represents a valuable contribution to psychological as well as to ethnological and educational literature. If the reviewer were allowed one word of criticism, it would be to the effect that the study as made fails to unearth some of the most deep-seated and dynamic superstitions which afflict humanity — those pertaining to crude forms of religious belief. For example, the belief that prayer may influence weather or other natural phenomena has no more basis in scientific fact than the emptiest 'wish superstition' enumerated by Professor Dresslar: yet the countless superstitions of this character were naturally not included in the lists reported. That is to say, *only such beliefs as have become generally subject to more or less doubt were men-*

tioned as superstitions. These represent in their very essence a weakened condition of belief, and so must be relatively unimportant in their influence on behavior. The most real, abiding, and influential superstitions — those with which it is most important for education to grapple — are not touched upon in this study.

Other subjects treated besides those already mentioned are Charms and Cures, Animals in Superstitious Lore, the Most Common Superstitions, 'Over the Left,' Wishing, Remembering Superstitions, etc.

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EDUCATION.

Experimentelle Didaktik, ihre Grundlegung mit besonderer Rücksicht auf Muskelsinn, Wille und Tat. W. A. LAY. Leipzig, Nemnich, 1905. Pp. xxi + 595.

Lay's Experimentelle Didaktik may be said to derive its special importance from two facts: first, the entire work treats pedagogy by the experimental method; secondly, the author emphasizes throughout the book the importance of motor education, holding that the realization of the principle involved will transform instruction which is passive and static into that which is active and dynamic.

Dr. Lay first considers the muscle sense. After disproving the formerly widespread view of an 'innervation sense,' he shows that the muscle sense includes not only muscular sensations but the total complex of sensations resulting from the movement or position of any part of the body. These sensations belong to the sense of touch, are hence not of central but peripheral nature, and form varied complexes out of the sensation of the joints, tendons, ligaments, muscles and skin. These sensations form an important element in the new psychology. "No perception without movement of the sense organs: no sensation, no idea, no feeling, no willing without motor sensations and motor images." In treating of the motor development in childhood, he discusses spontaneous, reflex, instinctive, and voluntary movements, their order of development, and their fundamental importance in the development of the senses and the mental life of the child. He shows experimentally the importance of motor images in drawing, demonstrating that form is conceived more easily, clearly, surely, and lastingly if the pupil receives sensations of movement and touch as well as light. In the discussion of the instinctive and play activities of the child, it is shown that their activity leads not merely to the perfection of physical dexterity, control, and carriage of the entire body, but con-

tributes to the development of the senses, of attention, of perseverance and courage in action, of feeling, furnishes an extremely valuable experience of the relation of cause and effect, and supplies the imagination with rich and abundant material.

Feeling, attention, association and assimilation, objective and verbal instruction, imagination, thinking, suggestion, practice and memory, learning, and habit are taken up in turn; in all of these the psychology of movement, in which muscle sense and motor images play the chief parts, is clearly brought out and its pedagogical value indicated. Attention, *e. g.*, is essentially a complex of motor elements. The primary causes of attentions are instincts and impulses; intensive sense impression, strong feeling, power of habit are but secondary, depending on the former. Attention means concentration; distraction means diffusion of movements.

In the discussion of objective and verbal instruction, the author emphasizes the former, contending that all other instruction must be joined to this, and that consequently foreign language instruction must not expand to such an extent that objective instruction as a main branch is interfered with.

Dr. Lay's more important experiments pertain to perceptual types and periodicity. From the first the conclusion is reached that in orthography the visual element predominates over the acoustic and the motor considerably over both. It is not true that most people are auditory-minded, as many psychologists believe. Lay found that in spelling and arithmetic (number) motor images of speech assumed a very important place with all pupils; all pupils are speech-motor, but not all are graphic-motor. "There are no perceptual types in the sense that word images and number images consist only in sound pictures or written pictures, or in speech-motor, or writing-motor images; but it is well to distinguish auditory, visual, and motor types in the sense that one predominates, and alone or in connection with certain others produces the best results in perceiving and remembering."

As to periodicity, exhaustive experiments showed that all pupils have a fixed psychic rhythm and a fixed psychical energy peculiar to themselves; both are subject to hourly, daily, weekly, monthly and most likely yearly fluctuations. The psychic energy of each pupil moves up and down in waves during the day, in a manner peculiar to himself, reaching two high points, one in the forenoon and one in the afternoon. The daily maximum of psychic energy is reached with many pupils during the forenoon, often during the afternoon, but seldom at night.

A résumé of the studies of fatigue of school children is given and the conclusion reached that the school system, at least in Germany, is radically wrong, and that the demand of the higher schools leads to overburdening in home study.

The latter part of the book deals with a discussion of the will. This is of a philosophical nature, tending to further establish his fundamental principle, the sensory-motor process. "Every psychical process is sensory-motor, for every conscious occurrence there are motor processes, motor sensations, motor images and muscle movements; a strict separation of intellect and will is impossible and has proved harmful many times in the theory and practice of pedagogy."

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Comment former un esprit. DR. TOULOUSE. Paris, Librairie Hachette et Cie. Pp. x + 255.

This little volume contains a series of ten lessons of a popular character for educators, in which the author sums up that which his experience of psychology and medicine emphasizes as of decisive value in the culture of the mind. He proceeds from the familiar point of view that education is not the mere possession of knowledge but a forming of the mind so as to effect an adaptation to the conditions of life. The acquisition of facts, to be sure, is a partial means to this end, yet there is nothing eternally fixed about facts, and hence from the point of view of mental formation the process of acquiring is more to be desired than the accomplishment. Since observation and judgment are means by which facts are gained, a discussion of how to perform these functions is embodied in distinct chapters. The points brought out in this discussion, as well as in the subsequent chapters on 'How to think' and 'How to act,' are worn by much use. They are attractively written, however, and possess a considerable value for the general reader, especially as far as the author has set forth in them the bearing of the emotional life upon thinking and acting.

Following these are two chapters which deal respectively with the art of living with others and that of being one's self and thus effecting an economy of effort.

That chapter, however, which deals with the principles of sexual morals will be found most provocative of thought on the part of the professional educator. From the point of view of morals and of health instruction in sexual matters should be afforded to every child. The informatiou imparted must be of a definite character, so that the child

shall know exactly what we are talking about. This is especially a problem for parents, but teachers cannot escape their responsibility.

The volume concludes with a series of brief suggestive essays on 'Backward children,' 'Youth,' 'The need of work,' — in which work is represented as a physiological necessity, and the need of it as a variable with our powers, — 'Repose,' 'The secret chapter' and 'The crisis,' — in both of which the marriage relation is under discussion, — and last of all 'The sense of life,' a happy little essay which contains a good deal of the philosophy of a successful life. 'What is it worth?' is a question which must insistently be asked when we contemplate either work or diversion; and our occupations as well as our avocations should stand or fall according to our sober response to that question.

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PAIN SENSE.

Psycho-physiologie de la douleur. I. IOTEYKO et M. STEFANOWSKA. Paris, Alcan, 1909. Pp. 251.

Distinguishing between 'physical' and 'moral' pain, and in the former between the sensation and its disagreeableness, the authors of this book have brought together a large number of the facts and opinions which the investigations of recent years have developed with regard to the difficult problem of physical pain, and have made use of them as argument and evidence for the general conclusion that pain is a sensation due to the stimulation of special organs, the modification of which is transmitted by special paths of conduction to a special pain center in the cortex. All the main facts and considerations bearing on this conclusion may be found more concisely expressed in an article of thirty pages by E. Wertheimer ('La douleur et les nerfs dolorifiques,' *L'Année Psychologique*, 1907, pp. 370–399). Our authors, however, make several original contributions to the theory. They discover, *e. g.*, that menthol allays pain before arousing the sensation of cold, indicating, it is argued (p. 118), direct action of the menthol on pain nerves (but no account appears to have been taken of the possible influence of 'suggestion'). They find, further (p. 62), that people generally, both the right-handed and the left-handed, are more sensitive to pain on the left side, in the proportion, namely, of 10 to 9, and they conclude from this (p. 101 f.) that there is a special center for pain distinct from the other sense-centers, — an inference which, as Wertheimer remarks, seems to rest on a foundation somewhat preca-

rious. But the most notable contribution to the theory is the argument of I. Ioteyko (pp. 191 ff.) for the view that pain is excited by specific algogenic substances generated at the moment of strong stimulation. The argument rests partly on analogy, — the pains of inflammation and those due to injected poisons, *e. g.*, may plausibly be referred to the irritation of toxins; partly on certain peculiarities of pain, such as its relatively tardy appearance, its persistence and irradiation and its evocation by summation of stimuli, which the theory explains better, it is claimed, than any other. The theory rests on the view that pain is a function of the intensity of the stimulus (p. 45), but the conception of strong stimulation is clearly relative, since the threshold of pain, while generally higher, can, according to v. Frey, in certain regions be even much lower than that of pressure (p. 78). Specific algogenic substances have not yet been discovered, but the theory is sufficiently interesting and plausible to serve as a working hypothesis. It may not be out of place to remark, since the fact could hardly be inferred from the book, that a toxic theory of pain is not altogether new. It was favored, *e. g.*, by Ribot in 1896 (*Psych. des Sent.*, p. 41), following the still earlier indications of Oppenheimer, and in the same year in which our author published her paper on *Les substances algogènes* by Lagerborg (*Gefühlsproblem*, 1905, p. 100).

Of the literary conscience that has gone into the composition of this work, the less said perhaps the better. There are eight pages of bibliography, which contain many valuable titles, but they are not placed in any exact alphabetical order and the list is woefully incomplete. Not only could works not noticed by our authors be easily added, but certainly more than a score of writers mentioned in the text, some of them quoted at length, do not appear in it at all (Georget, Blocq, Moebius, Sollier, Bertholet, Gerdy, Landry, Larget, Dastre, Colucci, Le Brun, Murray, Wundt, etc.). This is the more deplorable because titles are almost entirely absent from the body of the text, and never by any chance through the entire work is there a single precise reference by chapter and page. A number of names are habitually misspelled; *e. g.*, Sherrington, Scherrington (pp. 177, 243), Krause, Krauze (pp. 81, 176), v. Tschisch (p. 244), Tschich (p. 42), Tchich (pp. 168, 226), Tschitch (p. 200). But still worse must be said: these writers, namely, have not hesitated, and that not once, but repeatedly, to transcribe whole passages from their authorities without the slightest indication by reference or quotation marks of their indebtedness. Thus on p. 7 and the following there are actually five pages of direct quotation from Beaunis's *Sensations internes*, pp. 225 ff., with omissions

and the slight change from the first person to the third; on pp. 14–18 there is similar cribbing from Dumont's *Théorie scientifique de la sensibilité*, pp. 64 f., 80, 83 and 140 f.; on p. 177 f. more than a page is appropriated from Wertheimer's article, p. 373 f. How far this method of book-making has been followed, it would be hard, in the absence of direct references, to say; but evidently the authors have not yet freed themselves from the vicious undergraduate practice of copying into note-books extracts and abstracts and then writing them out formally, without proper citation or reference, under selected headings. This method may be pardonable in undergraduates, but it is simply inexcusable in work that claims serious scientific recognition. It is to be hoped that the authors' experimental work shows a greater regard to accuracy.

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ORGANIC SENSE.

Organic Sensations and Organismic Feeling. THOMAS P. BAILEY. J. of Philos., etc., 1908, V., 406–412.

The author describes in some detail a state of merriment followed by one of indignation. The first is characterized as one of 'diffused suffusion'; "a sort of gentle, twittering, ticklish, vibrating glow possesses me." The second mood is described as an "'all-over feeling' of tension, which *seems to be spreading* to particular muscles. . . ." 'Faint twitters and spasmodic quivers' remain. "The internal sensations seem to be supersensitive, but are now rather acute than massive, more definitely localizable, and less indicative of an 'organismic' reaction."

The first mood is affective, the second muscular and emotional. The contrast appears between the "external and internal *sensation* of 'tickling'" of the second mood, and "the attitude or affective mood of 'ticklishness'" of the first. An abortive attack of influenza in the afternoon of the same day gave Bailey proof that the peripheral nerve extremities were hyperæsthetic. The relations of sensation, relation (association), and impulse in the two directions, quality and intensity, determine the attitude. 'Organismic' sensations, the affections, originate in 'diffused' organic sensations. "When 'quality' is in the functional foreground we have sensation-in-time-and-space perception; when 'intensity' is dominant, we get 'feeling,' which may take either an impulsive or a relational direction.

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DISCUSSION AND REPORTS.

NOTE ON SOME DIFFERENCES BETWEEN 'SAVAGES' AND CHILDREN.

Many biologists and psychologists and some anthropologists and ethnologists seem to have accepted the 'parallel of the child and the race' as signifying an almost absolute identity of action and of thoughts between the child and primitive man, wherever such identity is physically or psychically possible. For such theorists the common sayings, 'all savages are children,' and 'children are little savages,' are understood with surprising literalness, not to say dogmatism. But even where parallelisms and identities of a recapitulatory sort may reasonably be expected, there do exist sometimes between the child and the 'savage' differences in actions and in thoughts that are very characteristic and of no little significance for the student of the evolution of the individual and the race.

Some interesting examples of such differences are to be found in methods or systems of counting and their representation in sign-language, etc. Father Joseph Meier,[1] in his discussion of the numerals in the Moanus language, of the Admiralty Islands, part of the Bismarck Achipelago, northeast of New Guinea, calls attention to the words for 7, 8 and 9 and their representation in sign-language. In the Moanus tongue there are separate and distinct terms for the numerals from one to six, but the next three following are, respectively, *andra*-tálo, *andra*-ruo, *andra*-si, literally 'yet three,' 'yet two,' 'yet one,'— the idea being that when we have 7, it is 'still 3 to 10.' In order to represent 7 with his fingers the Moanus native will show the closed fist of one hand, with three fingers of the other hand outstretched; for 8 one fist closed, with two fingers of the other hand outstretched; for 9 one fist closed, with the thumb of the other hand outstretched.

Thus, when a Moanus native wishes to express seven in sign-language, he bends down seven fingers and stretches out three, whereas the European or American child would stretch out seven fingers to convey the same idea. Moreover, with our children one finger is *stretched out* for each unit, while with the Moanus Islanders for each unit one is *bent down;* with the former six is represented by the fingers of one hand and one of those of the other outstretched, with the

[1] Meier, Joseph. Berichtigungen zu Dr. Schnee's Mitteilungen über die Sprache der Moánus, Admiralitäts-Inseln. *Anthropos*, Vol. I., 1906, pp. 210–228, 472–482.

latter by one closed hand and the thumb of the other bent down and brought close to it. Here we have a distinct difference in the method of indicating units, as well as an equally marked one in the expression of the numbers 7, 8 and 9 in sign-language.

Another interesting fact is recorded by Mr. F. H. Cushing,[1] the eminent ethnologist, who possessed such an intimate acquaintance with the Zuñi Indians. Following is his experience in his own words (p. 313): "I was not a little astonished to find that the Zuñis did not consider the two hands held up apart as meaning ten. I can illustrate this and its cause by my first experience of it as a Zuñi. Whilst I was serving an apprenticeship with the chief silversmith of Zuñi, in 1881, he asked me one day how many li-a-li-we (silver bits or dimes) I had. As my mouth was full of buttons, I held up both hands spread out and apart, to assure him that I had *ten* ten-cent pieces. 'Alas, son!' said he, 'I already have *two half-dollars*, but I was hoping you had ten-cent pieces enough to exchange for them.' 'But I have,' said I, ejecting the buttons and resuming speech in my surprise; whereupon he laughed at my having *split* the sign for ten, making it two fives, which he had interpreted as meaning two half-dollars."

A child of the white race would have interpreted the two-hand gesture as the adult Cushing did, not thinking it could signify 'two fives apart or separately,' but merely 'two fives together,' *i. e.*, 'ten.' The Zuñi word for ten, *as-tem-'thla*, signifies literally 'all of the fingers,' being derived from *as-si*, 'fingers together (or as one),' and *tem-'thla*, 'all.' The gesture for 'ten' in Zuñi is the two hands (with fingers close together in each) held up with thumbs crossed, or the same sign with the fingers of each hand bent on the palm. This is not a gesture which a child of our race would naturally make for 'ten,' though the knuckling down of the fingers might not be unknown to him.

The following experience of Dr. Dixon and Dr. Kroeber[2] among the Yuki Indians of California deserves citation here:

"The old man from whom the numerals were mainly obtained was asked if he knew how many fingers he had. He answered, without hesitation, *hutcamopesul*, ten. He was asked how many fingers and toes he had, and said he did not know. Two pairs of hands were spread out on the ground in front of him, and he was asked

[1] Cushing, F. H. Manual Concepts: A Study of the Influence of Hand-Usage upon Culture-Growth. *American Anthropologist*, Vol. V., 1892, pp. 289–317.

[2] Dixon, R. B., and Kroeber, A. L. Numeral Systems of the Languages of California. *American Anthropologist*, N. S., Vol. IX., 1907, pp. 663–690.

to count the fingers on them. He proceeded to push the fingers aside one by one, grouping them by fours and pausing after eight and sixteen. One thumb having been overlooked, he made the total *molmihuipoi*, nineteen, and announced that as the result" (p. 668). The authors remark concerning this interesting experiment:

"This incident is told, not to show the feeble arithmetical powers of the Yuki, for the old man's error was due, no doubt, to his being unaccustomed to count other people's fingers, and, had he been allowed to operate, as habitually, with sticks, the mistake would probably not have occurred; but to illustrate how completely this system, many of whose terms do have reference to the fingers, departs from the common primitive quinary-vigesimal finger-and-toe counting methods, and is purely quaternary. It does not follow that because people count by their fingers they count by fives."

Here is an experimental demonstration of the fact that people who count by fingers do not necessarily count by fives. And in other things than counting corresponding facts doubtless occur, which destroy some of the other dogmatic statements found in certain text-books.

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MEETING OF THE NORTH CENTRAL ASSOCIATION OF TEACHERS OF PSYCHOLOGY.

FROM A REPORT OF THE SECRETARY.

A meeting of the North Central Association of Teachers of Psychology in Normal Schools and Colleges was held at the University of Chicago, April 3, 1909. The sessions were held in Emmons Blaine Hall, the School of Education. About fifty teachers of psychology from normal schools and colleges in seven of the North Central States were in attendance.

The majority of the papers and discussions centered about the teaching of the elementary course in psychology, and though characterized by much individual divergence of theory and practice tended to favor the further use of experimental methods and exercises and the introduction of more data from social psychology.

Professor Seashore in his paper entitled 'A Written Recitation and a Class Experiment,' explained a method of conducting a written recitation by which large classes may be handled: (1) Every individual student shall take active and responsible part in the experiment; (2) the experiment shall be sufficiently intensive to make it vital, and (3)

each step in the experiment shall be explained and interpreted in a printed leaflet. It was recommended that psychologists coöperate in producing a series of such experiments.

Two distinct if not opposed types of social psychology were represented in the papers by Mr. Ernest Talbert and Professor Charles H. Judd. Mr. Talbert urged in his paper on the 'Value of Social Psychology' that an adequate social psychology must proceed from the analysis of fundamental instincts, 'dispositions' and sentiments, showing how they work out in the life of groups. For college students the study of social psychology has some points of advantage over the conventional treatment of individual psychology. A discussion of public opinion, instincts and their working, suggestibility, the mob, custom, conventionality, the imitation cycle theory, etc., with reference to and criticism of representative writers (Wundt, Tarde, Baldwin, Ross and McDougall) gives the introspective practice of 'pure' psychology, combined with a measure of objectivity and an appreciation of the relation of the individual to the group. It creates a sense of the importance of the education process as the technique of carrying over the psychical inheritance from generation to generation.

Professor Judd in his address on Social Psychology criticized the type of social psychology represented in the writings of McDougall, Ross and Sumner, in so far as it assumes social instincts, impulses, emotions, suggestibility, imitation to be the chief data of the science, and fails to recognize the transforming and controlling social influence of the evolution of systems of ideas.

The use of tools is a line of mental development which can be clearly traced. The earliest tools were made in a purely imitative way, because the range of comprehension of primitive man was limited. As the ability to concentrate attention upon material and upon principles of construction grew, the complexity of the tool also increased and a complexity of the process of manipulation reached the stage which appears in modern industrial life.

Such examples make it clear that a principle of evoluton different from that of the biological sciences is necessary to account for human progress. The higher forms of intelligence are distinct factors in the forms of evolution. The ability to have ideas and to enlarge upon them is a distinctive human trait which the animals do not possess. The recognition of an intellectual type of evolution gives to educational practice a larger foundation.

Professor J. R. Angell read a paper on 'Conflicting Ideals in the Teaching of Psychology,' which will be published in the *Educational*

Bi-Monthly. The program also included papers on 'A Way of Simplifying the Introductory Course in Psychology,' by Mr. Rowland Haynes; 'A Device by which Physiological Concepts may be Employed in Teaching Psychological Processes,' by Dr. N. A. Harvey; 'Teaching the Organic Conception in the Introductory Course,' by J. B. Miner; and 'A Course of Applied Psychology for School Teachers,' by Mr. Frank G. Bruner.

Professor E. J. Swift gave an account of 'Relearning a Skillful Act: An Experimental Study in Neuro-Muscular Memory.'

NOTES AND NEWS.

AMONG the delegates to the Darwin celebration in Cambridge, June 21–24, we notice the following who are especially interested in psychology: President Schurman, representing Cornell University; Professor C. S. Minot, representing the Boston Society of Natural History; Professor J. Loeb, representing the University of California; and Professor Baldwin, representing the Johns Hopkins University and the Government of Mexico.

THE forty-seventh annual convention of the National Education Association will be held in Denver, July 3–9.

WE note with regret the deaths of S. S. Laurie and Hutchinson Stirling, both of Edinburgh, and of F. S. Rauh, of Paris.

PROFESSOR ROBERT H. GAULT, of Washington College (Md.), has been appointed to a chair in psychology at Northwestern University.

PROFESSOR MAX MEYER, of the University of Missouri, has gone for a year's stay in Europe, on leave of absence.

THROUGH an error of the translator the title of Professor Beauvisage was rendered *Père* Beauvisage in Dr. Philippe's article in our March issue (Vol. VI., p. 89, line 3).

DURING Professor Baldwin's absence in Europe during the coming academic year, all MSS., books, communications, etc., relative to the REVIEW proper, should be sent to Professor J. B. Watson, Johns Hopkins University. Professor Watson becomes, from now on, one of the Editors of this REVIEW.